Complete Summary

TITLE

Pharmacotherapy management of chronic obstructive pulmonary disease (COPD) exacerbation: percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or ED encounter between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid within 14 days of the event.

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 1, Narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 90 p.

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 417 p.

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of chronic obstructive pulmonary disease (COPD) exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency department (ED) encounter between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid within 14 days of the event.

RATIONALE

While other major causes of death have been decreasing, chronic obstructive pulmonary disease (COPD) mortality has risen, making it the fourth leading cause of death in the United States (NHLBI, 2006). COPD is characterized by airflow limitation that is not fully reversible, is usually progressive and is associated with an abnormal inflammatory response of the lung to noxious particles or gases (GOLD, 2006). COPD defines a group of diseases that includes chronic bronchitis and emphysema, and patients are prone to frequent exacerbations of symptoms that range from chronic cough and sputum production to severe disabling shortness of breath, leading to significant impairment of quality of life (*MMWR*, 2002; McCory et al., 2001).

In addition to being a major cause of chronic disability, COPD is a driver of significant health care service use. The disease results in both high direct and high indirect costs, and exacerbations of COPD account for the greatest burden on the health care system (GOLD, 2006), though studies have shown that proper management of exacerbations may have the greatest potential to reduce the clinical, social and economic impact of the disease. Pharmacotherapy is an essential component of proper management.

The National Heart, Lung, and Blood Institute (NHLBI) states that over 12 million adults have been diagnosed with chronic obstructive pulmonary disease (COPD) and the actual number of those with the disease may be higher. COPD exacerbation is a change in the patient's baseline dyspnea, cough or sputum that is beyond normal day-to-day variations, is acute in onset and may warrant a change in regular medication in a patient with underlying COPD (GOLD, 2006). Exacerbations may be the most significant drivers of negative impacts on a COPD patient. After an exacerbation, both patient's symptoms and lung function can take several weeks to recover to baseline (Seemungal, 2000), and quality of life declines drastically (Spencer, 2004). While there is no cure for COPD, decreasing the frequency of exacerbations may slow its progression, and thus should be a critical goal of management (Pierson, 2004).

Studies show that bronchodilators and systemic corticosteroids are the most ideal treatments for home/outpatient management of exacerbations. Bronchodilators are the foundation of pharmacotherapy for COPD because of their capacity to alleviate symptoms, decrease exacerbations and improve the health status of COPD patients. Bronchodilators can be used to increase exercise tolerance and improve forced expiratory volume in one second (FEV_1) (Sutherland and Cherniak, 2004; American Thoracic Surgeons [ATS], 2004). Administration of systemic corticosteroids for up to two weeks was found to be beneficial for patients with moderate or severe COPD exacerbation (Snow et al., 2001). One randomized, placebo-controlled trial showed that oral prednisone significantly reduced the rate of relapse and led to better symptom management than the placebo group (Aaron et al., 2003).

PRIMARY CLINICAL COMPONENT

Pharmacotherapy management; chronic obstructive pulmonary disease (COPD) exacerbation; systemic corticosteroid

DENOMINATOR DESCRIPTION

Health plan members 40 years of age or older as of January 1 of the measurement year with a chronic obstructive pulmonary disease (COPD) exacerbation as indicated by an acute inpatient discharge or emergency department (ED) encounter with a principal diagnosis of COPD (see the "Description of Case Finding" and the "Denominator Inclusions/Exclusions" fields in the Complete Summary)

Note: The eligible population for this measure is based on acute inpatient discharges and ED visits, not on members. It is possible for the denominator to include multiple events for the same individual.

NUMERATOR DESCRIPTION

Dispensed prescription for systemic corticosteroid (refer to Table PCE-C in the original measure documentation for a list of systemic corticosteroids) on or 14 days after the Episode Date (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Accreditation
Decision-making by businesses about health-plan purchasing
Decision-making by consumers about health plan/provider choice
External oversight/Medicaid
External oversight/Medicare
External oversight/State government program
Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Managed Care Plans

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Age greater than or equal to 40 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

See the "Rationale" field.

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

See the "Rationale" field.

UTILIZATION

From 1993-2002, the number of hospital discharges for chronic obstructive pulmonary disease (COPD) increased from 461,000 to 619,000. While average length of stay decreased from 7.2 to 5.1 days, the average total charges per discharge increased from $10,500 to $15,400.

See also the "Rationale" field.

EVIDENCE FOR UTILIZATION

Nationwide inpatient sample, 1993-2002. [internet]. Rockville (MD): Agency for Healthcare Research and Quality; [accessed 2007 Nov 28].

COSTS

The economic and social burden of chronic obstructive pulmonary disease (COPD) exacerbations are extremely high, account for nearly one million emergency department (ED) visits each year, and result in approximately 450,000 hospitalizations, all at an annual cost of about $2.4 billion.

Cost-effectiveness studies found in the literature tended to focus on the incremental cost-effectiveness of different pharmacotherapy combinations, but a randomized, control trial examining the cost-consequence of fluticasone propionate (FP) treatment found that FP was associated with statistically significant clinical benefits for symptomatic, moderate-to-severe COPD patients compared to placebo, and that differences in resulting costs were small.

See also the "Rationale" field.

EVIDENCE FOR COSTS

Ayres JG, Price MJ, Efthimiou J. Cost-effectiveness of fluticasone propionate in the treatment of chronic obstructive pulmonary disease: a double-blind randomized, placebo-controlled trial. Respir Med2003 Mar;97(3):212-20. PubMed

Cydulka RK, Rowe BH, Clark S, Emerman CL, Camargo CA Jr, MARC Investigators. Emergency department management of acute exacerbations of chronic obstructive pulmonary disease in the elderly: the Multicenter Airway Research Collaboration. J Am Geriatr Soc2003 Jul;51(7):908-16. PubMed

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Timeliness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Health plan members 40 years of age or older as of January 1 of the measurement year who were continuously enrolled from the Episode Date* through 30 days after the Episode Date* who had no gaps in enrollment with a chronic obstructive pulmonary disease (COPD) exacerbation as indicated by an acute inpatient discharge or emergency department (ED) encounter with a principal diagnosis of COPD

Episode Date*: The date of service for any acute inpatient discharge or ED claim/encounter during the Intake Period with a principal diagnosis of COPD.

For an *acute inpatient claim/encounter*, the Episode Date is the date of discharge.

For an *ED claim/encounter*, the Episode Date is the date of service.

***Intake Period*: An 11-month period that begins on January 1 of the measurement year and ends on November 30 of the measurement year. The Intake Period captures eligible episodes of treatment.

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Health plan members 40 years of age or older as of January 1 of the measurement year with a chronic obstructive pulmonary disease (COPD) exacerbation as indicated by an acute inpatient discharge or emergency department (ED) encounter with a principal diagnosis of COPD

Note: The eligible population for this measure is based on acute inpatient discharges and ED visits, not on members. It is possible for the denominator to include multiple events for the same individual.

Refer to the original measure documentation for steps to identify the eligible population.

Exclusions

- Do not include ED visits that result in an inpatient admission.
- *Test for transfers*. Exclude Episode Dates on which the member was transferred directly to an acute or nonacute care facility for any diagnosis.
- *Test for readmission and additional ED visits*. Exclude Episode Dates for which the member was readmitted to an acute or nonacute facility for any diagnosis on or within seven days after the Episode Date. Exclude Episode Dates for which the member had an ED visit for any diagnosis on or seven days after the Episode Date.

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Encounter
Institutionalization
Patient Characteristic

DENOMINATOR TIME WINDOW

Time window brackets index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
Dispensed prescription for systemic corticosteroid (refer to Table PCE-C in the original measure documentation for a list of systemic corticosteroids) on or 14 days after the Episode Date. The organization may count systemic corticosteroids that are active on the Episode Date.

A prescription is active if the "days supply" indicated on the date the member filled the prescription is the number of days or more between that date and the relevant Episode Date.

Exclusions
Unspecified

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Analysis by subgroup (stratification on patient factors, geographic factors, etc.)

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

This measure requires that results are reported separately for the commercial, Medicare, and Medicaid product lines.

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Pharmacotherapy management of COPD exacerbation (PCE).

MEASURE COLLECTION

HEDIS® 2010: Health Plan Employer Data and Information Set

MEASURE SET NAME

Effectiveness of Care

MEASURE SUBSET NAME

Respiratory Conditions

DEVELOPER

National Committee for Quality Assurance

FUNDING SOURCE(S)

Unspecified

COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

ENDORSER

National Quality Forum

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2007 Jul

REVISION DATE

2009 Jul

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: National Committee for Quality Assurance (NCQA). HEDIS® 2009: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2008 Jul. various p.

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 1, Narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 90 p.

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 417 p.

MEASURE AVAILABILITY

The individual measure, "Pharmacotherapy Management of COPD Exacerbation (PCE)," is published in "HEDIS® 2010. Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications."

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on November 15, 2007. The information was not verified by the measure developer. This NQMC summary was updated by ECRI Institute on March 10, 2009. The information was verified by the measure developer on May 29, 2009. This NQMC summary was updated again by ECRI Institute on January 15, 2010.

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